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ABSTRACT

A model of evaluation planning, implementation, and management is presented that includes: (1) a management information system (MIS) to provide a description of the size and scope of adult literacy and post-literacy programs (ALPPs); (2) naturalistic evaluation to provide insight into the meanings of ALPPs as experienced by participants; and (3) rationalistic evaluation of ALPPs. The model considers the MIS as the foundation stone of a dynamic culture of information. Naturalistic evaluation adds meaning to the data. Rationalistic evaluation is used to: make normative statements, make comparisons between groups, and assert correlations between particular variables. Implementing this model in international settings requires: commitment to internal evaluation; introduction of the model in settings providing technical assistance; and recognition of the outside evaluator's role as a skilled guest, qualified in the theory and methodology of evaluation. Meta evaluative objectives and the input of all stakeholders will be required to achieve a dynamic culture of information, reviewing both instrumental and moral questions. One figure illustrates the model. (SLD)

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MANAGEMENT INFORMATION SYSTEMS FOR BASIC EDUCATION: DISCOVERING AND SUPPORTING CURRENT BEST PRACTICE IN ADULT LITERACY AND POST-LITERACY EVALUATION

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This paper was presented at the panel, "Participatory Monitoring of Literacy and Post-Literacy Programs: A Six-Nation Demonstration Project of the UNESCO Institute of Education," organized at the Comparative and International Education Society annual meeting, University of Pittsburgh, Pittsburgh, March 14-17, 1991.

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H.S. Bhola

This paper will focus on management information systems in the area of adult literacy and post-literacy. However, the focus on management information systems will not mean an exclusion of all other evaluation approaches to information gathering and evaluation. Indeed, the model of evaluation planning, implementation and management, to be presented in the body of the paper, is a triangle of approaches that includes (i) a management information system (MIS) to provide a description of the size and scope of literacy and post-literacy programs; (ii) naturalistic evaluation (NE) to provide insights into the meanings of literacy and post-literacy as experienced by participants as individuals and their communities; and (iii) rationalistic evaluation (RE) to enable practitioners to make normative statements about the total program, to render comparisons and discover correlations between variables and aspects of programs, if and when needs arise.

The paper also takes some clear value positions. First, we hold the value that evaluation should be, first and foremost, internal evaluation, to serve the purposes of the program and the interests of the participants in a program. External uses of the evaluation data and results should be secondary. The second value that pervades all discussion that follows is that of collaboration and participation among all stakeholders. Third, it is being suggested that in installing management information systems (and in implementing evaluation studies), the value of discovering and supporting current best practice should be honestly embraced. That is, the indigenous and the already acquired modes and patterns of gathering, generating, synthesizing, legitimizing and interpreting information -- both descriptive and evaluative -- for use in decision making should be understood; and these modes and patterns of information handling should become the foundations for a renewed culture of information and a future system of evaluation.

BETWEEN THEORY AND PRACTICE: A PERSONAL JOURNEY

I will not be saying anything unusual if I stated that my individual construct of evaluation, and the model I will be presenting later, have come about through my own personally-

experienced dialectic between evaluation theory and evaluation practice. The theories of evaluation were learned from the universities (mostly, the Ohio State University), and professional associations (principally, the American Evaluation Association) in the United States, over a period of time streching from 1964 to the present. These theories became meaningful in my life through personal contacts with my teacher, colleague and friend, Professor Egon G. Guba, an eminent world-renowned theoretician of evaluation -- which is not to say that he will put his seal of approval on the model that I will be presenting below.

Opportunities for the practice of evaluation became available to me, first, as a UNESCO field expert on the Experimental World Literacy Program in Tanzania during 1968-70; and, later, as part of consultancy missions in behalf of UNESCO, USAID and, much more consistently and frequently, with the German Foundation for International Development (DSE), Bonn. These missions, during the last fifteen years took me to Tanzania, Kenya, Zambia, Malawi, Ethiopia, Botswana, Zimbabwe and China.

LEARNING FROM EVALUATION THEORY

My personal journey in evaluation theory is by no means unique to me. I was, of course, trained in positivist epistemology, logical-deductive methodology and statistical analysis at the Ohio State University in the early 1960s. But seeds of doubt about the supremacy of the positivist paradigm were being sown in my mind even as I was learning the so-called "scientific" paradigm. Professors in classes talked glibly of continua, and systems. Kaplan (1964) sought to demystify the conduct of inquiry and assured us that inquiry indeed did not work the way positivists would have us believe. Berger and Luckmann (1966) talked of the social construction of reality. Campbell and Stanley (1966) were retreating, at least indirectly, from the experimental design as they talked about quasi-experimental design, while Webb and his associates (1966) lent respectability to unobstrusive measures. Glaser and Strauss (1967) made the concept of grounded theory popular. People were beginning to talk about ethnographies and case studies with deserved respect. The rest is history!

In the area of evaluation theory, in particular, I started with the work of Egon G. Guba and Dan Stufflebeam at Ohio State. Later, the PDK book on evaluation (1971) became a dependable source. The availability of work on taxonomies of educational objectives, and educational and social indicators

had led me to accept the usefulness of management information systems. I did become aware of the many models of evaluation -- the discrepancy evaluation model, goal-free evaluation, transactional evaluation approach, evaluation as illumination, advocacy model of evaluation, and participatory evaluation; and I did seek to integrate all I had learned during the 1960s and 1970s in my own book Evaluating Functional Literacy (Bhola, 1979). The book did indeed talk of indicators and MIS's, and of both formalistic and naturalistic approaches, though these three components did not find the complete integration achieved in more recent work (Bhola, 1990, 1991).

In the meantime, discussion of evaluation theory came to be conducted not in terms of evaluation models but in terms of paradigms of inquiry such as logical-positivism, constructionism, critical theory and so on as captured in Guba (1990). Understandably, as the 1980s began, I had found myself leaning heavily towards naturalistic evaluation strategies. That seemed like the only sensible thing to do. But I did so without a complete rejection of everything else. I had not thrown away RE, nor, for that matter, the MIS. Indeed, the MIS became central to my conception of evaluation planning, implementation and management. The world of practice had cautioned against clean breaks and compelled accommodation among approaches.

LEARNING FROM EVALUATION PRACTICE

Practical experience in evaluation came to me from my work in Tanzania, Kenya, Zambia, Botswana, Ethiopia, Malawi and Zimbabwe in Africa, and from India and China in Asia. It is not possible within the scope of this paper to review these experiences in any detail, and it seems unnecessary to include a list of relevant references, most of them unpublished reports that are not easily available. We will be satisfied by mentioning that irrespective of the theoretical discussion of the possibility or the impossibility of combining or reconciling different paradigms, the practitioners demanded accommodation between and among approaches. The wanted not theoretical elegance but all the various tools that would help them understand their programs and also help them survive the politics that pervaded the processes of program planning, implementation and its evaluation.

The following were some concrete learnings from the world of practice:

a. In the Third World, the practitioners' conception of evaluation is what we have called rationalistic evaluation. This is what they have all been hearing about for years; and this is what is demanded of them by most donors from abroad, and, therefore, by their bosses at home. Breaking the magic of RE will not be easy.

b. In view of the above, RE is what they want to learn about in training workshops and courses when these are offered to them by donors under various technical assistance packages.

c. Ironically, rationalistic evaluation is not the evaluation they actually conduct in real-life contexts of their programs; and they hardly ever find themselves using results from this type of evaluation in doing their work. When an RE study is undertaken, it is typically conducted by an outsider; its results are available late and often not at all; and what results do become available are hardly ever used for programmatic purposes but are only put to political uses by policy makers.

d. The information that practitioners do actually need, and do actually use when available, is descriptive information about the size and scope of their programs, and about changes in patterns of participation and effects over time.

e. After, the descriptive informtion referred to in the immediately preceding paragraph, the information most used by practitioners is qualitative information picked up in field visits, informal interviews, conversations, and anecdotes.

LESSONS FROM THE DIALECTIC BETWEEN THEORY AND PRACTICE

From the dialectic between theory and practice, the lessons learned were the following:

1. Neither by positivism, nor by constructionism alone. The first lesson was about the logical-positivist paradigm in general. It was clear that this was not the only mode of making assertions about the world. The related, and perhaps the more important, learning was that logical positivism had to be complemented with the constructionist paradigm. In the real world, there was need for both story and theory, for metaphor and mathematics, for numbers and meanings.

2. Not merely discreet and discontinuous evaluation studies, but a culture of information. Too often evaluation in literacy and post-literacy projects, programs and campaigns gets

translated into occasional, discreet, and discontinuous, stand-alone evaluation studies in the so-called scientific or the naturalistic modes of inquiry. These evaluation studies consume a considerable amount of resources, generate lot of fear and tension among the various stakeholders, and their use is more often political than programmatic. They are often untimely. Of course, evaluations have to be done sometimes. At times, we need them, and sometimes we are ordered to do them. What we are suggesting here is that within organizations of literacy and post-literacy, we should seek to create "cultures of information" so that information collection, synthesis and utilization in decision-making becomes a norm and a habit. We are not suggesting a dichotomous choice: that we stop doing evaluation studies and get busy in creating cultures of information. We suggest that we give priority to developing cultures of information. Evaluation studies may be conducted within the context of such cultures of information.

3. Descriptive information is oftener used than evaluative information. In the real world of planning and action, descriptive information (information on the size and scope of the program) is more often used than evaluative information (that makes comparisons, establishes correlations, or surveys attitudes, feelings or experiences). Therefore, descriptive information of the type that goes into an MIS should be at the core of the strategy for bulding new cultures of information.

4. The next most used information is qualitative information, best obtained through naturalistic evaluation. In the world of practice, it is seen that after MIS, NE is the next most used mode of information generation. If systematic NE is not available, decision makers do infact go ahead and use impressionistic and anecdotal data.

5. Rationalistic evaluation has a useful but infrequent role to play. Rationalistic evaluation used to be the only acceptable evaluation. There are, of course, several settings that Cronbach characterises as "contexts of control" (quoted in Bhola, 1990, 1991) where RE models and approaches are the appropriate choices. But these situations are few and RE studies answer questions only regarding choices at the policy level and seldom at the programmatic level.

6. Needed is a concrete model for developing a culture of information. An ideal model for helping develop a culture of information should have an MIS system at the core, but it must also include NE, and RE. What is a dynamic culture of

information? Here is a description and definition: Any organization in the very process of being will acquire a culture of information, but what we need, of course, is a vibrant, democratic and smoothly functioning culture of information. Within an organizational context, such a "culture of information" would mean an institutional culture or sub-culture that systematically collects, generates, stores, retrieves, synthesizes, interprets and utilizes appropriate information in all processes of decision-making and does so as a matter of course. This would indeed mean that the organization systematically collects and stores descriptive data generated through the very process of implementation of its objectives and programs. It means also that such an organization would generate evaluative data through special evaluation studies appropriately designed and timed to be able to judge the value and worth of its various programs and projects. Information within such an organization will flow back and forth horizontally; and will flow vertically across all levels, both up and down the system. Informed decision making will become a universally-shared norm.

7. Need to discover and support current best practice. All cultures, by definition, are also cultures of information. Indeed, everywhere in the world, in the developing as well as in the developed world, information was collected and used to manage affairs of life, and multiple types of evaluations were made long before evaluation, as we know it today, came to the fore, acquired a scientific theory, and became a professional practice. Thus, the task is not to build anew but to renew. As we build renewed, more systematic, more dynamic and more democratic cultures of information in various societies or within different professional sectors of societies, we must build "new" cultures of information on the "old" ones. Again, in teaching-learning new theories and methodologies of evaluation, we must discover and support the indigenous, already-in-use grounded theories and internalized methods of stocktaking, receiving feedback, and assigning value and worth.

8. Participative strategies are the only way to invent and actualize a culture of information. Finally, we suggest that both in the process of inventing cultures of information and conducting evaluation studies, participative strategies be used. All through the process of building a culture of information, there is no room for "mere experts," because many of the choices are not merely technical choices but choices between values as well. Therefore, both for functional reasons and for ideological purposes, participative strategies are necessary. It is after

all, the participants alone who have knowledge of what is, and have the right to invent what ought to be.

A MODEL FOR USE IN CREATING CULTURES OF INFORMATION

A model to assist in developing a culture of information is presented below:

[INSERT DIAGRAM HERE]

Brief definitions of MIS, NE and RE were included in the opening paragraph of the paper. The theoretical contexts and the methodological implications of each have been discussed at several places in the paper. A few additional remarks are appropriate at this stage.

THE MIS AS CORE: THE NECESSITY OF DESCRIPTIVE INFORMATION

The model presented here considers the MIS as the foundation stone of a dynamic culture of information. It is too often forgotten that descriptive information, if not more important, is as least as important as evaluative information in management and decision making within program systems. By descriptive information we mean, of course, the information about the size and scope of a program which is generated in the very process of implementation of a program. Examples of such information are: the number of participants in a literacy or post-literacy program at various times in the program cycle, their distribution according to gender, age, and occupation, the number of groups and their locations, and the patterns of learner achievement and outcomes in regard to literacy, functionality and awareness. We should note that an MIS can include both quantitative and qualitative data and that such data can be manipulated to get evaluative information which otherwise would have to be obtained through specially designed and conducted evaluation studies. The mutual interdependences among MIS, NE and RE should also be noted.

NATURALISTIC EVALUATION: ADDING MEANING TO NUMBERS

Descriptive information about the scope and size of a program is pregnant with lot of evaluative information, but

additional evaluative information is often necessary. By evaluative information we mean information that enables program decision makers to make assertions in regard to qualities, and meanings of programs; and to establish contrasts and correlations between components and aspects of program inputs within particular contexts. The evaluative information provided particularly by NE (for RE see below) is thus information on the meanings of these programs as experienced by participants in their lives. NE is concerned with general patterns and dispositions, not theories and hypotheses. Methods are qualitative. Data analysis is thematic. Writing is in the form of case studies. The hope is to make warranted assertions in context and to be able to provide insights for other contexts.

RATIONALISTIC EVALUATION: FOR COMPARISONS AND CORRELATIONS

RE is best known around the world because it is best disseminated and has perhaps fulfilled people's needs for certainties and never-failing general principles. It assumes "a world out there for everyone to see" and about which law-like statements can be made. Its methods are experimental, and its analysis is typically statistical. In literacy and post-literacy, RE may be used for making normative statements about large populations, to make comparisons between groups, and to assert correlations between particular variables.

THE COLLABORATIVE-PARTICIPATIVE BIAS OF THE MODEL

We should be cautious so as not to misconstrue the epistemic bias of the model as diagramed. The model does use the term MIS, a somewhat pretentious term made popular by computer-based system analysts. While we retained the term because it has become the current coin of discussion in the evaluation field, we do not mean to imply that computers are necessary for developing MIS's. Paper-and-pencil MIS's can and should be built where resources do not permit purchase of computer technology. Also, MIS's should be built upon indigenous systems of management of information, howsoever rudimentary these existing systems may be. The model also favors NE over RE. After descriptive data provided by an MIS, NE is considered to be the most important mode of information development so as to be able to combine numbers with meanings. In favoring NE, we do not seek to promote an orthodoxy of theory or methodology. What is suggested are participative strategies for putting heads together to make collective constructions, leading to warranted assertions in particular contexts. Both the

intellectual and the intuitive should be used. The best of logic and of discernment are necessary.

IMPLEMENTING THE MODEL IN INTERNATIONAL SETTINGS

At first sight, the model presented above may not seem theoretically consistent and elegent. It may be viewed as built upon inconsistent assumptions and to include mixed categories of NE and RE both of which are predicated on an MIS, a technology with positivist ancestory. It will help to be reminded that the model is an instance of "grounded theory." In the real world, policy makers, planners, programmers and other practitioners of literacy and post-literacy have been found to need and work with both descriptive information and evaluative informtion. Further, in regard to evaluative information, practitioners have crying needs for understanding their program actions both in a normative sense (through RE) and in an experiential sense (through NE). This model, as a child of grounded theory, should also be justifiable on grounds of higher epistemological theory. While reality is an individual construction, we do come into "a world already half constructed." The world is indeed definable in the categories of "the context of accommodation" and "the context of control" (Chronbach quoted in Bhola, 1990, 1991). Information about a phenomenon provided by the MIS, by NE and RE does add up to a richer picture.

The commitment to internal evaluation. With leanings towards a constructionist view of reality, we are in favor of collaborative strategies in the planning and delivery of technical assistance and participative approaches intra-nationally to do needs assessment, program development and evaluation at various levels. This model itself, we suggest, should be offered to colleagues within a collaborative framework as "something to think with," and it should be adapted for implementation in particular contexts within networks of participatory relationships among all stakeholders.

The introduction of the model in settings of technical assistance. We accept the necessity of teaching-learning across cultures and the need for flow of knowledge across national boundaries. We do, however, have a position of the nature of transactions of technical assistance around this model. The selling of this model should be seen not as a one-sided technical assistance from the donor to the recipient or unidirectional technology transfer or knowledge dissemination. The transaction of technical assistance should be seen as an articulation of a mutual commitment of donors and recipients; and some measure of

resource transfers from the donor to the recipient to help create an opportunity and an event around which evaluation of literacy programs within a system could take place on a regular basis.

The role of the outsider. The role of the outsider (the bearer of the model in this case) should not be that of an all-knowing expert, consultant, or trainer, but as a colleague who has been around people who have gone through things of this sort. He or she should be seen as a good guest, who honors the recipient culture, is sympathetic to their aspirations, accepts them as what they are but who will yet honesty "hold the mirror to them" in which they may be able to see both their strengths and their shortcomings.

The qualifications and skills of the guest visitor. While the role of the visitor will not be that of an expert that does not mean that the visitor should have no expertise. Indeed, the visitor should have expertise in the theory and methodology of evaluation. The visitor should be able to understand both the instrumental and the moral role of evaluation. Most importantly, he or she should be able to look at the larger calculus of means and ends embedded in the program and the network of social relationships within which the program and its evaluation are being implemented.

Since the style of interaction between the visitor and the visited will be dialogic, the visitor should understand the nature of human discourse, the dynamics of group processes, and should be able to promote genuine communication, in Edgar Dale's words, "sharing of meanings in a mood of mutuality."

The meta objective in the intersystem encounter. At the head of the list of concrete evaluation objectives, there should be meta evaluation objectives:

1. to enable a particular group of stakeholders in a literacy or post-literacy program to step out of their immersions in the daily routines of the program and to look at the larger calculus of means and ends and the moral meanings of their actions; and

2. to learn to do so self-consciously, using the best in (i) logic and (ii) discernment, rising above self-deceptions and misperceptions.

Discovering and supporting current best practice. The model to be implemented (and described in greater detail earlier

in the paper) is an empty set. It talks of MIS, NE and RE, but does not talk about what must be put in the empty set. Indeed, we suggest strongly that the model be re-invented within local settings and should be built on current best practice.

What this would mean is that all stakeholders (including visitors) work collaboratively to identify and record the existing patterns of information generation, filing, recording, retrieving and using information. All systems will already have something in this regard, even though what exists may be inadequate or underutilized. What this means is that the new MIS should be designed and developed around the existing system of record keeping; the agenda for NE, and subsequently the methodologies of NE studies, should be based on the existing ways of making meanings out of field visits, community meetings, and whole set of unobstrusive measures. Finally, the agenda of RE itself should be based on existing procedures of conducting inspections, audits and accreditation visits.

The achievement: a culture of information. If this encounter is successful, the achievement will be a "dynamic" culture of information within the partner system in the encounter. Of course, all systems to be so called, have to have within them patterns of communication and control, that is, a culture of information of some sort. Therefore, all projects, programs and campaigns of literacy and post-literacy will already be cultures of information. What we are hoping for is that this will be a renewed culture, a more dynamic culture, with new norms and new habits about the generation, storage, retrieval and use of information. It will be a culture of information that is not merely efficient but moral. Thus, it will be a culture of information that reviews both instrumental questions and moral questions, that evaluates both individual achievements and social disparities. Within the system boundaries, it will be a democratic culture wherein information flows within the system up and down and is accessible to all concerned.

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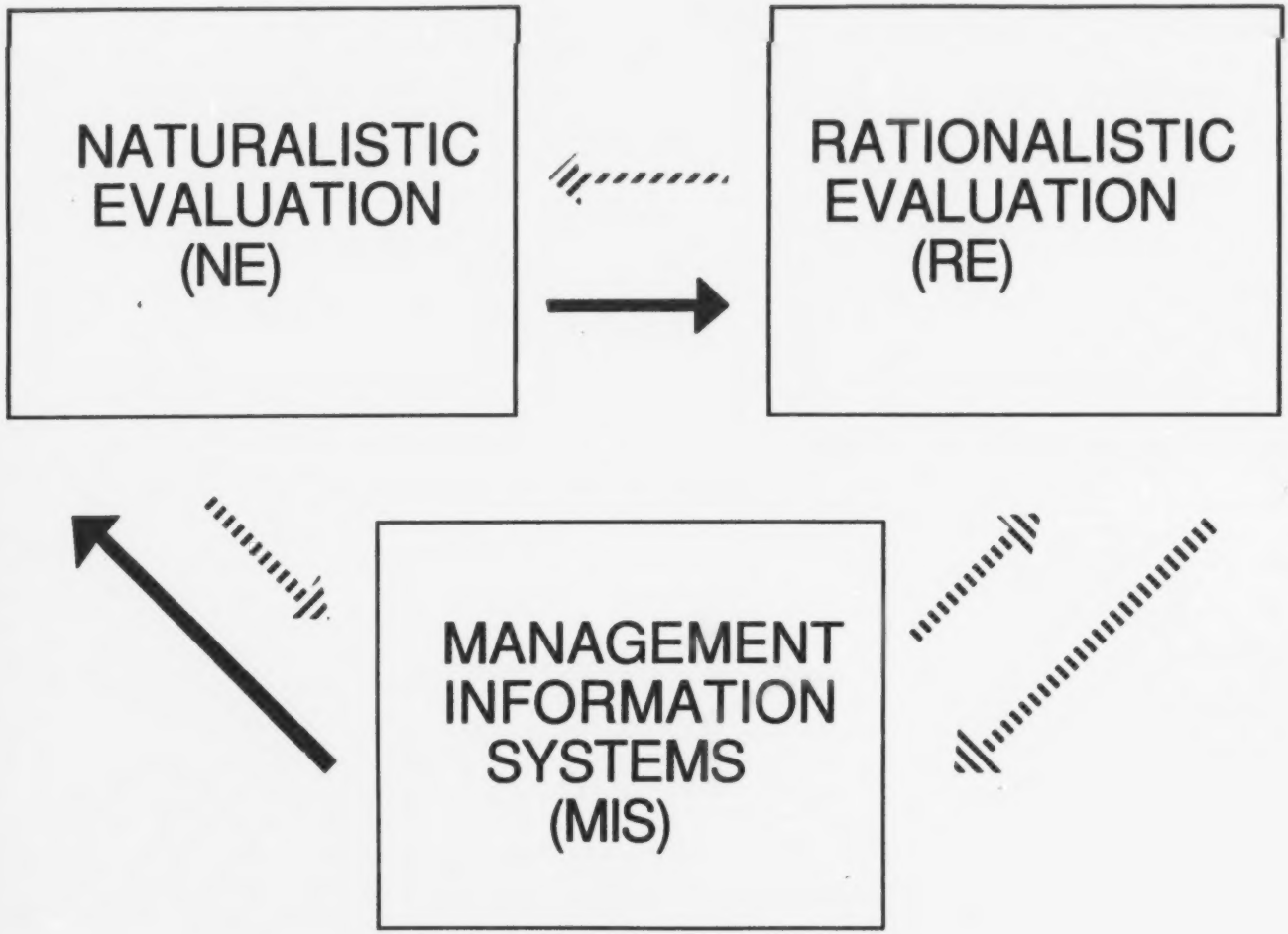

Figure 1: A Model for Evaluation Planning and Management in the Context of Program Implementation and Policy Assessment